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PRIORITY

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1966 JAN 25 00 05Z

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SUBJ: SUBJECTIVE ANALYSIS OF THE THERMAL CHANGES IN THE STEREO MIRROR OF MISSION 4018.

ATTN:

1. THE FOLLOWING NOTES WERE COMPILED IN AN EFFORT TO DETERMINE THE INFLUENCE OF TEMP CHANGES IN THE STEREO MIRROR ON MSN 4018. THE ANALYSIS WAS CONDUCTED ON A SUBJECTIVE BASIS AND IS THEREFORE BIASED BY OTHER INFLUENCES, SUCH AS ATMOSPHERIC ATTENUATION, OBLIQUITY, CAMERA ANOMALIES AND SYSTEM LIMITATIONS. IN THE ANALYSIS, THE NBRS 1 THRU 7 WERE USED TO DESCRIBE THE COMPARATIVE IMAGE QUALITY - NUMBER 1 REPRESENTING THE BEST QUALITY AND NUMBER 7 THE POOREST.

2. THE FOLLOWING LIST INCLUDES: PASS, FRAME, APPROX CLOUD COVER PERCENTAGE, THE APPARENT INFLUENCE OF ATMOSPHERIC ATTENUATION, A NUMERICAL QUALITY RATING, PHOTO INTERPRETABILITY, AND A GENERAL QUALITY STATEMENT.

P FR CC ATMOS QUAL PI
63D 1 75 MODERATE TO HEAVY 3 GOOD

TRUCKS ARE EASILY DISTINGUISHABLE FROM AUTO AND SOME VEHICLE DETAILS ARE DISCERNABLE - THE HOOD FROM THE WINDSHIELD, ETC.

P FR CC ATMOS QUAL PI

25 JAN 1966

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TOP SECRET

25X1

-2-

63D 2 85 MODERATE TO HEAVY 3 GOOD

TERRAIN IS VISIBLE ONLY THROUGH BREAKS IN THE CLOUD COVER.
IMAGERY IS SOMEWHAT DEGRADED BY ATMOS. HIGH CONTRAST OBJECTS ARE
WELL DEFINED.

P FR CC ATMOS QUAL PI

63D 3 35 MODERATE 2 GOOD

THERE IS A DISTINCT LOSS OF CONTRAST IN ASSN WITH ATMOS
ATTENUATION. HOWEVER, THE IMAGE QUAL IS GOOD. AUTO SEPARATIONS
ARE DISTINGUISHABLE (HOOD, FENDERS, AND TOP ETC.).

P FR CC ATMOS QUAL PI

63D 4 30 MINOR 1 EXCELLENT

THIS FR CONTAINS IMAGERY EQUAL TO THE BEST OF THE MSN.

P FR CC ATMOS QUAL PI

63D 5 25 MINOR 2 VERY GOOD

THE IMAGERY OF THIS FR IS NOT QUITE AS GOOD AS FR 4 (MATCHING
FR OF STEREO PR); HOWEVER, DETAILS IN VEHICLE IMAGES ARE READILY
APPARENT.

P FR CC ATMOS QUAL PI

63D 6 0 VERY LITTLE 1 EXCELLENT

THE IMAGE QUALITY OF THIS FR IS EQUAL TO THE BEST OF THE
MSN. ENGINE NACELLS AND COWLING SEPARATIONS ON AIRCRAFT ARE
EASILY DISCERNABLE.

P FR CC ATMOS QUAL PI

63D 7 35 MODERATE 2 GOOD

ALTHOUGH THE INFLUENCE OF ATMOS ATTEN IS VARIABLE THROUGHOUT

-3-

THE FR, DETAILS CAN BY SEEN IN MOST IMAGED VEHICLES.

P	FR	CC	ATMOS	QUAL	PI
63D	8	20	MODERATE TO HEAVY	2	FAIR TO GOOD

THE IMAGERY WITHIN THE FR IS NOT AS ACUTE AS THAT OF PREV
FRS OF THE PASS. PRONOUNCED ATMOS ATTEN PRECLUDES A DEFINITE QUAL
APPRAISAL OF SYSTEM PERFORMANCE.

P	FR	CC	ATMOS	QUAL	PI
63D	9	25	MINOR TO MODERATE	2	

THE OVERALL QUALITY OF THE IMAGERY IS SLIGHTLY BETTER THAN
THAT OF THE PREV FR. LACK OF CULTURE PRECLUDES A DETAILED EVAL.
HOWEVER, BLDG EDGES ARE SHARP AND WELL DEFINED.

P	FR	CC	ATMOS	QUAL	PI
63D	10,11,12	25			

IMAGERY IS ALL WATER - IMAGE QUALITY IS UNDETERMINED.

P	FR	CC	ATMOS	QUAL	PI
64D	1,2	100			

CC PRECLUDES A QUAL APPRAISAL.

P	FR	CC	ATMOS	QUAL	PI
64D	3	55	MODERATE	3	FAIR TO GOOD

LACK OF CULTURAL FEATURES RENDERS THIS FR POOR FOR EVAL.
THE OVERALL QUALITY APPEARS TO BE CONSISTANT AND THERE IS A SUBTLE
OUT-OF-FOCUS CONDITION THROUGHOUT. DEFINITE BLDG SHAPES AND TREE
TYPES ARE DISCERNABLE.

P	FR	CC	ATMOS	QUAL	PI
64D	4	80	HEAVY	5	FAIR TO POOR

- 4 -

THIS IS THE POOREST QUAL PHOTOGRAPHY OBSERVED TO THIS POINT OF THE ANALYSIS. HEAVY CC PRECLUDES EXACT CAUSE AND EXTENT OF IMAGE DEGRADATION. IMAGE QUALITY VARIES THROUGHOUT THE FR BUT SO DOES THE HAZE LAYER. THE IMAGERY IS DEFINITELY OUT-OF-FOCUS TO SOME DEGREE.

P	FR	CC	ATMOS	QUAL	PI
64D	5	80	HEAVY	5	FAIR TO POOR

THIS IS THE SECOND HALF OF A STEREO PAIR. (MATCHES FR 4) IT IS DEFINITELY OUT-OF-FOCUS. THE QUALITY IS APPROX THE SAME AS THAT OF FR 4.

P	FR	CC	ATMOS	QUAL	PI
64D	6	80	HEAVY CLOUDS - HAZE	6	POOR

ATMOS ATTENUATION CAUSES AN UNDETERMINED AMT OF DEGRADATION. THE FR IS FURTHER DEGRADED BY AN OUT-OF-FOCUS CONDITION. THE IMAGE QUALITY OF THIS, THE POOREST FR SO FAR, IS VARIABLE AND SPOTTY. IT IS IMPOSSIBLE TO DETERMINE IF THE VARIATIONS OF QUALITY ARE CAUSED BY CHANGES IN THE DEGREE OF ATMOS ATTENUATION OR BY CHANGES IN THE AMT OF MIRROR WARPAGE.

P	FR	CC	ATMOS	QUAL	PI
64D	7	95	SEVERE	6	POOR

HEAVY CLOUDS AND HAZE CONTRIBUTE TO THE IMAGE DEGRADATION. THE IMAGE QUALITY IS ABOUT EQUAL TO THAT OF THE PREVIOUS FR. THE IMAGES, VISABLE THROUGH THE CLOUDS ARE OF CONSISTANTLY POOR QUALITY THROUGHOUT THE FORMAT. THERE IS A DEFINITE OUT-OF-FOCUS CONDITION.

P	FR	CC	ATMOS	QUAL	PI
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-5-

64D 7 95 EXTREME 6 POOR

HEAVY CLOUDS AND HAZE FURTHER DEGRADE THIS, OUT-OF-FOCUS
FR. THE IMAGERY IS CONSISTANTLY BAD IN AREAS. ONLY THE GENERAL
SHAPE OF BLDGS ARE RESOLVED.

P FR CC ATMOS QUAL PI

64D 12 0 VERY LITTLE 3 GOOD

IMAGE QUAL IS APPROX EQUAL THROUGHOUT THE FR. VEHICLE
SHAPES, SIZES AND SEPARATIONS (HOOD, FENDERS, AND TOPS, ETC.)
ARE APPARENT. FOCUS IS NOT OPTIMUM.

P FR CC ATMOS QUAL PI

64D 13 10 MODERATE 6 POOR

SEVERLY DEGRADED BY AN OUT-OF-FOCUS CONDITION. ONLY THE
GENERAL SHAPES OF BLDGS ARE DISCERNABLE. THE DEGRADATION IS
CONSISTANT THROUGHOUT THE FR.

P FR CC ATMOS QUAL PI

65D 1,2 95 SEVERE 7 POOR

TERRAIN IMAGES ARE VISABLE THROUGH THE CLOUDS IN ONLY A
FEW PLACES. THE DEGRADATION IS APPROX EQUAL TO THAT OF FR 13,
PASS 64D.

P FR CC ATMOS QUAL PI

65D 3 25 MODERATE 7 POOR

ALL IMAGES ARE SEVERELY DEGRADED. IMAGE QUAL IS APPROX
EQUAL TO THE PREVIOUS FR. ONLY THE GENERAL SHAPE OF BLDGS ARE
RESOLVED.

P FR CC ATMOS QUAL PI

65D 4 40 MINOR AND MODERATE 7 POOR

-6-

THE FIRST 50 PERCENT OF THE FR IS CLEAR AND IS WELL SUITED FOR ANALYSIS. ALL IMAGES ARE SEVERELY DEGRADED BY AN OUT-OF-FOCUS CONDITION. ONLY BLDG SHAPES ARE RESOLVED.

P FR CC ATMOS QUAL PI

65D 5,6

ALL CLOUDS AND WATER - NO EVAL

P FR CC ATMOS QUAL PI

68D 1,2 100

NO EVAL.

P FR CC ATMOS QUAL PI

68D 3,4 95 HEAVY 3 FAIR TO GOOD

STEREO PR NOT WELL SUITED FOR EVALUATION; ONLY SMALL AREAS OF SHORE-LINE IMAGERY VISABLE THROUGH THE CLOUDS. THERE APPEARS TO BE A SUBSTANTIAL IMPROVEMENT IN IMAGE QUAL COMPARED TO THE LAST, SEVERAL FRS.

P FR CC ATMOS QUAL PI

69D 1,2 0 MINOR 2 VERY GOOD

THE IMAGERY OF THESE AND ALL SUBSEQUENT FRS APPEARS TO BE NORM FOR THE SYST.

3. THE FOREGOING ANALYSIS WAS CONDUCTED ON A SUBJECTIVE BASIS. THE 0 NEG WAS VIEWED AT 60X ENL FACTOR. IN REALITY THE PI'S WOULD PROBABLY ANALYZE THE FILM AT LOWER MAG TO MINIMIZE THE APPARENT DEGRADATION.

T O P S E C R E T

--END OF MESSAGE--